

What is claimed:

1. A catheter assemble comprising a diagnostic-therapeutic catheter formed into a flexible tubular configuration, and an introducing catheter which is accommodated into said diagnostic-therapeutic catheter,

the catheter assemble further comprising:

a distal portion of said introducing catheter having a taper-terminated portion, a linear portion, a linear-terminated portion and a stepped portion, either of which substantially engages tightly with a distal portion of said diagnostic catheter without a gap or clearance; and

an annular space provided between a shaft portion of said diagnostic-therapeutic catheter and said introducing catheter except for the distal portion of said shaft portion.

2. A catheter assemble according to claim 1, in which said annular space is formed between inner and outer tubes concentrically provided to extend from a proximal end portion to said distal end of said shaft portion of said diagnostic-therapeutic catheter, said annular space having a drug-releasable open end at least partially exposed to an outer surface of said shaft portion, and said outer tube having a plurality of drug-releasable side holes.

3. A catheter assemble according to claim 2, in which said inner and outer tubes are formed by synthetic resin, and said inner tube is reinforced by a braided metallic

wire work built in an area at least except for a distal portion of said inner tube.

4. A catheter assemble according to claim 2, in which at least a part of said inner and outer tubes are formed by a metallic pipe.

5. A catheter assemble according to claim 2, in which a helical, linear or curved groove is formed on either an outer surface of said inner tube or an inner surface of said outer tube, or both of them.

6. A catheter assemble according to claim 1, in which said diagnostic-therapeutic catheter has a plurality of drug-releasable side holes.

7. A catheter assemble according to claim 1, in which a distal end of said diagnostic-therapeutic catheter has a bight portion, a distal end of which has an inner edge, a quarter or less of circumferential legnth of said inner edge being rounded rearward.

8. A catheter assemble according to claim 2, in which a distal end of said diagnostic-therapeutic catheter has a bight portion, a distal end of which has an inner edge, a quarter or less of circumferential legnth of said inner edge being rounded rearward.

9. A catheter assemble according to claim 3, in which a distal end of said diagnostic-therapeutic catheter has a bight portion, a distal end of which has an inner edge, a quarter or less of circumferential legnth of said inner edge being rounded rearward.

10. A catheter assemble according to claim 4, in which a distal end of said diagnostic-therapeutic catheter has a bight portion, a distal end of which has an inner edge, a quarter or less of circumferential legnth of said inner edge being rounded rearward.

11. A catheter assemble according to claim 5, in which a distal end of said diagnostic-therapeutic catheter has a bight portion, a distal end of which has an inner edge, a quarter or less of circumferential legnth of said inner edge being rounded rearward.

12. A catheter assemble according to claim 6, in which a distal end of said diagnostic-therapeutic catheter has a bight portion, a distal end of which has an inner edge, a quarter or less of circumferential legnth of said inner edge being rounded rearward.

13. A catheter assemble according to claim 1, in which said distal portion of said diagnostic-therapeutic catheter is formed into a cone-shaped configuration in a fashion to taper off toward a distal end of said diagnostic-therapeutic catheter.

14. A catheter assemble according to claim 2, in which said distal portion of said diagnostic-therapeutic catheter is formed into a cone-shaped configuration in a fashion to taper off toward a distal end of said diagnostic-therapeutic catheter.

15. A catheter assemble according to claim 6, in which said distal portion of said diagnostic-therapeutic

catheter is formed into a cone-shaped configuration in a fashion to taper off toward a distal end of said diagnostic-therapeutic catheter.

16. A catheter assemble according to claim 1, in which said distal portion of said diagnostic-therapeutic catheter is D25 ~ D63 in terms of Shore hardness.

17. A catheter assemble according to claim 2, in which said distal portion of said diagnostic-therapeutic catheter is D25 ~ D63 in terms of Shore hardness.

18. A catheter assemble according to claim 6, in which said distal portion of said diagnostic-therapeutic catheter is D25 ~ D63 in terms of Shore hardness.

19. A catheter assemble according to claim 7, in which said distal portion of said diagnostic-therapeutic catheter is D25 ~ D63 in terms of Shore hardness.

20. A catheter assemble according to claim 1, in which an outer surface of said diagnostic-therapeutic catheter is coated with a hydrophilic polymer.

21. A catheter assemble according to claim 2, in which an outer surface of said diagnostic-therapeutic catheter is coated with a hydrophilic polymer.

22. A catheter assemble according to claim 6, in which an outer surface of said diagnostic-therapeutic catheter is coated with a hydrophilic polymer.

23. A catheter assemble according to claim 7, in which an outer surface of said diagnostic-therapeutic catheter is coated with a hydrophilic polymer.

24. A catheter assemble according to claim 1, in which said distal portion of said introducing catheter has a maximum diameter at its front end and a cone-shaped portion connected to said linear portion to be tapered off toward said front end, and forming a stepped portion at a linear-terminated portion, a linear area of said shaft portion having a stepped portion at a predetermined distance from said linear-terminated portion, said distal portion further having a diameter-reduced lean portion from said stepped portion to a proximal end with an equi-diameter thickness through an entire length of said proximal end.

25. A catheter assemble according to claim 2, in which said distal portion of said introducing catheter has a maximum diameter at its front end and a cone-shaped portion connected to said linear portion to be tapered off toward said front end, and forming a stepped portion at a linear-terminated portion, a linear area of said shaft portion having a stepped portion at a predetermined distance from said linear-terminated portion, said distal portion further having a diameter-reduced lean portion from said stepped portion to a proximal end with an equi-diameter thickness through an entire length of said proximal end.

26. A catheter assemble according to claim 6, in which said distal end portion of said introducing catheter has a maximum diameter at its front end and a cone-shaped

portion connected to said linear portion to be tapered off toward said front end, and forming a stepped portion at a linear-terminated portion, a linear area of said shaft portion having a stepped portion at a predetermined distance from said linear-terminated portion, said distal portion further having a diameter-reduced lean portion from said stepped portion to a proximal end with an equi-diameter thickness through an entire length of said proximal end.